

**Abstract**

An apparatus and technique are provided for generating a plasma using a power supply circuit and arc detection arrangement. The power supply circuit has a cathode enclosed in a chamber, and is adapted to generate a power-related parameter. The arc  
5 detection arrangement is communicatively coupled to the power supply circuit and adapted to assess the severity of arcing in the chamber by comparing the power-related parameter to at least one threshold. According to various implementations, arc occurrences, arcing duration, intensity and/or energy are measured responsive to  
10 comparing the power-related parameter to the at least one threshold. According to further implementations, the above-mentioned measured quantities are accumulated and/or further processed.